BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellants:	Uwe Janssen et al.
Application No.:	10/564,399
Filed:	January 12, 2006
Title:	METHOD AND DATA CARRIER FOR HANDLING A DATABASE
Examiner:	Sana Al-Hashemi
Art Unit:	2156
Customer No.	24498

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In response to the final Office Action dated May 29, 2009, and further to the Notice of Appeal filed on November 30, 2009, Appellants hereby submit an Appeal Brief in accordance with 37 C.F.R. §41.37 for the above-referenced application. Applicants request a one month extension under 37 C.F.R. 1.136(a) to submit this response.

The fee for the Appeal Brief and the extension of time is being charged to Deposit Account 07-0832 using EFS-Web. Please charge this Deposit Account for any other fees owed in connection with the submission of this Brief.

No oral hearing is requested.

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I. Real Party in Interest

The real party in interest is Thomson Licensing LLC.

II. Related Appeals and Interferences

There are no prior or pending appeals, interferences, or judicial proceedings known to Appellants the Appellants' legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. Status of Claims

Claims 1-8 and 13-14 are pending in this application, and are rejected. Claims 9-12 are withdrawn. The rejection of claims 1-8 and 13-14 is being appealed.

IV. Status of Amendments

An amendment dated November 30, 2009 was filed and entered by being approved by the Examiner. The amended claims are shown in the index.

V. Summary of Claimed Subject Matter

Independent claim 1 defines a method for modifying a database file organized in segments and stored on a storage medium of limited rewritability (see, for example, page 1, lines 14-17 and 25-26), the method comprising the steps of:

- reserving, within the database file, at least one area of predetermined size and position dedicated to writing thereto data records of at least one type, respectively (see, for example, page 1, lines 26-29);

- indicating within the database file, as a last written segment that segment within the area to which data records were last written (see, for example, page 1, lines 29-31);

- writing a specific data record of a specific type that is to be written to the database, into at least one of: a next available segment and a next available segments, after the last written segment within the area dedicated to the specific type (see, for example, page 1, line 31 to page 2, line 5);

- continuing, whenever during the writing the end of the area has been reached, writing at a first available segment of the area (see, for example, page 2, lines 5-9).

Claim 2 further defines the method of claim 1, and states that the method is used for modifying a data record of a specific type in the database file wherein the database file contains an area dedicated to the specific type (see, for example, page 2, lines 18-19), and the method additionally comprises the steps of:

- reading, from the area, the data record (see, for example, page 2, lines 20-21);

- modifying the read data record (see, for example, page 2, lines 21-22);

- obtaining a first write address information indicating a segment within the area to which a data record of the specific type was last written (see, for example, page 2, lines 22-24);

- forwarding, as part of ensuring distributed write, the first write address information so that it indicates a next segment within the area which contains unused space (see, for example, page 2, lines 24-27);

- writing the modified data record to segments starting at the segment as indicated by the first write address information (see, for example, page 2, lines 27-29).

Claim 3 further defines the method of claim 2, and states wherein the data record is a payload data record, the specific type is a "payload" type, the area is a payload area, the database file additionally has a control area (see, for example, page 2, line 31 to page 3, line 3) and wherein the method additionally comprises the steps of:

- in case that an address information about the payload data record is contained in a control block within the control area, reading, from the control area, the control block (see, for example, page 3, lines 16-18);

- updating the address information in the control block to reflect the first write address (see, for example, page 3, lines 19-21);

- obtaining a second write address information indicating the segment within the control area to which a control block was last written (see, for example, page 3, lines 21-23);

- forwarding, as part of ensuring distributed write, the second write address information so that it indicates a next segment within the control area which contains unused space (see, for example, page 3, lines 23-26);

-       writing the updated control block to the segment as indicated by the second write address information (see, for example, page 3, lines 26-28).

Claim 4 further defines the method of claim 1, and states that the method is used for deleting a payload data record from the database file, wherein the database file contains a control area (see, for example, page 3, lines 14-16), and the method additionally comprises the steps of:

-       reading, from the control area, control blocks containing information associated to the payload data record to be deleted (see, for example, page 3, lines 16-18);

-       marking, in the read control blocks, the payload data record to be deleted as deleted, thereby obtaining a modified control block (see, for example, page 3, lines 19-21);

-       obtaining a write address information indicating the segment within the control area to which a control block was last written (see, for example, page 3, lines 21-23);

-       forwarding, as part of ensuring distributed write, the write address information so that it indicates a next segment within the control area which contains unused space (see, for example, page 3, lines 23-26);

-       writing the modified control block to the segment as indicated by the forwarded write address information (see, for example, page 3, lines 26-28).

Claim 5 further defines the method of claim 1, and states wherein the size of the segments corresponds to an integer multiple of the size of sectors as defined in a physical format on the storage medium (see, for example, page 8, lines 27-30).

Claim 6 further defines the method of claim 5, and states wherein the segments are allocated on the storage medium to be sector aligned (see, for example, page 12, lines 16-19).

Claim 7 further defines the method of claim 1, and states wherein the indicating is realized by attaching to a data record to be written a version count value which is incremented and taken modulo a predefined upper bound upon each writing, the

version count getting written to the database file as part of the data record being written thereto (see, for example, page 11, line 20 to page 12, line 13).

Claim 8 further defines the method of claim 1, and states wherein the size of the at least one area is chosen such that the average wear of the segments is equal (see, for example, page 1, lines 14-20; page 2, lines 13-16; page 4, lines 3-6 and 13-24; page 7, lines 3-6).

Claim 13 further defines the method of claim 1, and states wherein the size of the segments corresponds to an integer multiple of the size of Error Correction Code blocks as defined in a physical format on the storage medium (see, for example, page 8, lines 27-30).

Claim 14 further defines the method of claim 13, and states wherein the segments are allocated on the storage medium to be Error Correction Code block aligned (see, for example, page 8, lines 27-30 and page 12, lines 16-19).

VI. Grounds of Rejection to be Reviewed on Appeal

The following grounds of rejection are presented for review in this appeal:

A.   The rejection of claims 1-8 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2003/0172079 by Millikan et al. (hereinafter, "Millikan"); and

B.   The rejection of claims 13-14 under 35 U.S.C. §103(a) as being unpatentable over Millikan in view of U.S. Patent No. 6,330,394 issued to Itoi (hereinafter, "Itoi").

VII. Argument

A. Patentability of Claims 1-8

The rejection of claims 1-8 under 35 U.S.C. §102(e) as being anticipated by Millikan should be reversed for at least the following reasons.

Claim 1

Independent claim 1 recites:

"A method for modifying a database file organized in segments and stored on a storage medium of limited rewritability, the method comprising the steps of:
-       reserving, within the database file, at least one area of predetermined size and position dedicated to writing thereto data records of at least one type, respectively;
-       indicating within the database file, as a last written segment that segment within the area to which data records were last written;
-       writing a specific data record of a specific type that is to be written to the database, into at least one of: a next available segment and a next available segments, after the last written segment within the area dedicated to the specific type;
-       continuing, whenever during the writing the end of the area has been reached, writing at a first available segment of the area."

On page 2 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "indicating within the database file, as a last written segment that segment within the area to which data records were last written", as recited by independent claim 1, is disclosed by elements 92 in FIG. 4 of Miliken. Appellants respectfully disagree for at least the following reasons.

Elements 92 in FIG. 4 of Milliken are "entries", multiples of which are contained in a "segment" 90 (see paragraph [0037] which states: "Each entry 92 in segments 90 corresponds to an audio file and includes the genre ... the artist name ... and audio track name ...". No mention is made in Millikan that any of these entries 92 indicates "... that segment ... to which data records were last written", as recited by independent claim 1. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "indicating within the database file, as a last written segment that segment within the area to which data records were last written", as recited by independent claim 1.

On page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "writing a specific data record of a specific type that is to be written to the database, into at least one of a next available segment or segments after the last written segment within the area dedicated to the specific type", as previously recited by

independent claim 1, is disclosed by paragraph [0029], page 3, lines 4-10 of Milliken. Appellants respectfully disagree for at least the following reasons.

In the cited paragraph of Milliken, the only disclosure related to writing is ".. if the audio files are burned on to a CD, the presort is also burned onto the CD" (see paragraph [0029]). This disclosure in no way specifies, where on the CD the presort is being written to, only that it is being written together with the audio files. The cited paragraph of Milliken also does not disclose or suggest the concept of data records being of a certain type, and areas being dedicated to writing records of a certain type. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "writing a specific data record of a specific type that is to be written to the database, into at least one of: a next available segment and a next available segments, after the last written segment within the area dedicated to the specific type", as recited by independent claim 1.

Also on page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "continuing, whenever during the writing the end of the area has been reached, the writing at a first available segment of the area", as recited by independent claim 1, is disclosed by paragraph [0042] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan is not related to writing data records, but to scanning - in a particular desired order - audio files in a directory structure, and generating proxy values therefrom. The cited paragraph of Millikan also does not disclose or suggest in any way the notion of "wrap around" writing, as expressed in the purportedly related claim step. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "continuing, whenever during the writing the end of the area has been reached, writing at a first available segment of the area", as recited by independent claim 1.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of independent claim 1, and respectfully request that the Board reverse the rejection of independent claim 1.

Claim 2

Claim 2 depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 2 is independently patentable over Milliken for at least the following reasons.

Claim 2 recites:

> "The method of claim 1, used for modifying a data record of a specific type in the database file wherein the database file contains an area dedicated to the specific type, and the method additionally comprises the steps of:
> - reading, from the area, the data record;
> - modifying the read data record;
> - obtaining a first write address information indicating a segment within the area to which a data record of the specific type was last written;
> - forwarding, as part of ensuring distributed write, the first write address information so that it indicates a next segment within the area which contains unused space;
> - writing the modified data record to segments starting at the segment as indicated by the first write address information."

On page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that "Millikan discloses a method used for modifying a data record of a specific type in the database file...". Appellants respectfully disagree for at least the following reasons.

Millikan exclusively considers CD media, which after burning, have no further rewritability. Accordingly, Millikan does not consider "modifying a data record of a specific type in the database file" (emphasis added), as claimed, but only considers its creation and storage (burning) on the CD together with AV files. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, a method "used for modifying a data record of a specific type in the database file...", as recited by dependent claim 2.

Also on page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "modifying the read data record", as recited by dependent claim 2, is disclosed by paragraph [0043], lines 14-18 of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Milliken discloses activities of: "position the laser beam", "read the compressed audio data files ...", "transfer the data...", "store... this data", "read the audio data from memory", "decompress the audio data", "generate and provide ... audio signals"; none of which relates to any kind of modifying. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "modifying the read data record", as recited by dependent claim 2.

Also on page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "obtaining a first write address information indicating a segment within the area to which a data record of the specific type was last written", as recited by dependent claim 2, is disclosed by paragraph [0043], lines 18-20 of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[t]he CPU may store some or all of this data in memory and then read the audio data from the memory". Here, it is respectfully pointed out that in Millikan the "memory 114" is different from the "CD 71" in the "CD loader 118" (see the beginning of paragraph [0043]). Also, the cited paragraph of Millikan does not disclose or suggest the notion of "write address information indicating a segment... to which a data record... was last written". Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "obtaining a first write address information indicating a segment within the area to which a data record of the specific type was last written", as recited by dependent claim 2.

Also on page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "forwarding, as part of ensuring distributed write, the first write address information so that it indicates a next segment within the area which contains

unused space", as recited by dependent claim 2, is disclosed by paragraph [0044] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[t]o use the system 100, a user opens the disk drive and control mechanism 102 in accordance with conventional techniques and places a CD containing audio files, the metadata presort file, and file system information therein. Using controls 106 and display 108, the user can select a specific file to play or, as discussed below, select a presorted arrangement of files to play".

As indicated above, the cited paragraph of Millikan relates to functions of: "using a system", "opening a disk drive", "placing a CD therein", "using controls and [a] display", "select[ing] a file", and "play[ing a file]". None of these functions is related to notions of "write address information" or "unused space", as claimed. Additionally, as explained above, Millikan exclusively considers CD media, which after burning, have no further rewritability. Hence, the steps of "reading", "modifying" and "writing" are technically impossible on the CD player system of Millikan.

Also on page 3 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "writing the modified data record to segments starting at the segment as indicated by the first write address information", as recited by dependent claim 2, is disclosed by paragraph [0045] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "... the user can use input controls 106 to cause the CPU 110 [to] transmit the listing of the various sorting criteria from the vector sort table 88 (FIG. 4) to the display 108. Once displayed, via controls 106, the user can select one of the sorting criterion and the audio files will be played in the order corresponding to the selected sorting criterion. If the selected sorting criterion 94 includes file names, then the player's CPU 110 simply plays the files in the order specified using the file names".

As indicated above, the cited paragraph of Millikan relates to functions of: "using input controls", "caus[ing] the CPU [to] transmit the listing ... to the display", "select[ing] one of the sorting criterion", and "play[ing] the audio files". None of these functions is related to the notion of "writing the modified data record to segments starting at the segment as indicated by the first write address information", as recited by dependent claim 2.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 2, and respectfully request that the Board reverse the rejection of dependent claim 2.

Claim 3

Claim 3 ultimately depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 3 is independently patentable over Milliken for at least the following reasons.

Claim 3 recites:

> "The method of claim 2, wherein the data record is a payload data record, the specific type is a 'payload' type, the area is a payload area, the database file additionally has a control area and wherein the method additionally comprises the steps of:
> -   in case that an address information about the payload data record is contained in a control block within the control area, reading, from the control area, the control block;
> -   updating the address information in the control block to reflect the first write address;
> -   obtaining a second write address information indicating the segment within the control area to which a control block was last written;
> -   forwarding, as part of ensuring distributed write, the second write address information so that it indicates a next segment within the control area which contains unused space;
> -   writing the updated control block to the segment as indicated by the second write address information."

On page 4 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "in case that an address information about the payload data record is contained in a control block within the control area, reading, from the control area, the control block", as recited by dependent claim 3, is disclosed by paragraph [0044] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[t]o use the system 100, a user opens the disk drive and control mechanism 102 in accordance with conventional techniques and places a CD containing audio files, the metadata presort file, and file system information therein. Using controls 106 and display 108, the user can select a specific file to play or, as discussed below, select a presorted arrangement of files to play".

As indicated above, the cited paragraph of Millikan relates to functions of: "using a system", "opening a disk drive", "placing a CD therein", "using controls and [a] display", "select[ing] a file", and "play[ing a file]". None of these functions is related to notions of "address information", "payload data record", "control block within the control area", and "reading… the control block", as recited by dependent claim 3. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "in case that an address information about the payload data record is contained in a control block within the control area, reading, from the control area, the control block", as recited by dependent claim 3.

Also on page 4 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "updating the address information in the control block to reflect the first write address", as recited by dependent claim 3, is disclosed by paragraph [0045] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "... the user can use input controls 106 to cause the CPU 110 [to] transmit the listing of the various sorting criteria from the vector sort table 88 (FIG. 4) to the display 108. Once displayed, via controls 106, the user can select one of the sorting criterion and the audio files will be played in the order corresponding to the selected sorting criterion. If the selected sorting criterion 94

includes file names, then the player's CPU 110 simply plays the files in the order specified using the file names".

As indicated above, the cited paragraph of Millikan relates to functions of: "using input controls", "caus[ing] the CPU [to] transmit the listing ... to the display", "select[ing] one of the sorting criterion", and "play[ing] the audio files". None of these functions is related to the notion of "address information", a "control block" or a "write address" as recited by dependent claim 3. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "updating the address information in the control block to reflect the first write address", as recited by dependent claim 3.

Also on page 4 of the final Office Action dated May 29, 2009, the Examiner alleges that the steps of "obtaining a second write address information indicating the segment within the control area to which a control block was last written", "forwarding, as part of ensuring distributed write, the second write address information so that it indicates a next segment within the control area which contains unused space" and "writing the updated control block to the segment as indicated by the second write address information", as recited by dependent claim 3, are disclosed by paragraph [0039] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Milliken discloses "[t]he CPU 72 preferably creates the metadata presort file 86 before or while burning a CD and stores the presort file 86 on the CD at a predetermined location along with the compressed audio files. As will be explained in detail below, the audio files on the CD then can be played in the order associated with any of the presorted segments 90 without a player having to sort the audio files while the user waits. That is, the audio files have already been sorted and the player uses the presorted file information to permit a user to efficiently sort through and play the audio files in a desired order. In addition to the presort file 86 and the various audio files, 'file system' information is also assembled and stored on the disk during the burn process at a predetermined location. The file system information is commonly found on MP3 disks. The file system information contains standardized information regarding each audio file on the CD. Such information includes a name

(e.g., name of a song, name of file), total size of the file (i.e., number of bytes), and the starting address of the file on the CD. Other information may included as part of the file system information as well. The file system information preferably is stored on the CD at a predetermined standard location and extracted from the disk after the disk is inserted into a player."

As indicated above, the cited paragraph of Millikan relates to functions of: "creating a presort file before burning a CD", "storing the presort file on the CD", "playing audio files", "sorting through and playing audio files", and "assembling and storing file system information during the burn process". None of these functions is related to notions of a "second write address", a "control area", or "writing the updated control block" as recited by dependent claim 3. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the steps of "obtaining a second write address information indicating the segment within the control area to which a control block was last written", "forwarding, as part of ensuring distributed write, the second write address information so that it indicates a next segment within the control area which contains unused space" and "writing the updated control block to the segment as indicated by the second write address information", as recited by dependent claim 3.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 3, and respectfully request that the Board reverse the rejection of dependent claim 3.

Claim 4

Claim 4 depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 4 is independently patentable over Milliken for at least the following reasons.

Claim 4 recites:
 "The method of claim 1, used for deleting a payload data record from the database file , wherein the database file contains a control area, and the method additionally comprises the steps of:

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-      reading, from the control area, control blocks containing information associated to the payload data record to be deleted;
-      marking, in the read control blocks, the payload data record to be deleted as deleted, thereby obtaining a modified control block;
-      obtaining a write address information indicating the segment within the control area to which a control block was last written;
-      forwarding, as part of ensuring distributed write, the write address information so that it indicates a next segment within the control area which contains unused space;
-      writing the modified control block to the segment as indicated by the forwarded write address information."

On page 4 of the final Office Action dated May 29, 2009, the Examiner alleges that the step of "marking, in the read control blocks, the payload data record to be deleted as deleted, thereby obtaining a modified control block", as recited by dependent claim 4, is disclosed by paragraph [0030] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[i]n accordance with one preferred embodiment, the presort file is created using a personal computer. The computer burns a CD with a plurality of audio files and also the metadata presort file. Once burned, the CD can then be played using a suitable player. FIG. 2 shows a computer system 60 which can be used to create the presort file and burn a CD. As shown, the computer system 60 comprises a processor unit 62 coupled to a display 64, a keyboard 66, a mouse 68 and a CD burner 70. As is well known, an operator controls the computer using the keyboard 66 and/or mouse 68 and display 64. The CD burner 70 accepts a CD 71 via a slot or tray 73. The burner 70 accepts data from the processor unit 62 to format and write to the CD. CD burners are well known in the art."

As indicated above, the cited paragraph of Millikan relates to: "creating a presort file", "burning a CD", "playing a CD", and to a "computer system" and constituent parts thereof. None of this is related to notions of "marking... payload data record[s]", or a "modified control block", as recited by dependent claim 4. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the step of "marking, in the read control blocks, the payload data record to be deleted as deleted, thereby obtaining a modified control block", as recited by dependent claim 4.

On pages 4-5 of the final Office Action dated May 29, 2009, the Examiner alleges that the steps of "obtaining a write address information indicating the segment within the control area to which a control block was last written", "forwarding, as part of ensuring distributed write, the write address information so that it indicates a next segment within the control area which contains unused space" and "writing the modified control block to the segment as indicated by the forwarded write address information", as recited by dependent claim 4, are disclosed by paragraph [0034] and FIG. 4 of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[o]ne suitable format for the metadata presort file 86 is shown in FIG. 4. As shown, the preferred presort file 86 comprises a vector sort table 88 and one or more presort segments 90. The presort segments 90 comprise information the CPU 72 extracts taken from the audio files' metadata. Each presort segment 90 corresponds to a sorting criteria which may vary between presort segments. Each presort segment 90 contains information that is indicative of a particular order for the audio files. Exemplary sorting criteria include, without limitation". Moreover, FIG. 4 of Millikan discloses "a metadata presort file used by the player to sort audio files" (see paragraph [0024]).

As indicated above, the cited paragraph and FIG. 4 of Millikan relates to structural details of a data structure. As such, it fails to disclose or suggest, *inter alia*, steps of "obtaining a write address information indicating the segment within the control area to which a control block was last written", "forwarding, as part of ensuring distributed write, the write address information so that it indicates a next segment within the control area which contains unused space" and "writing the modified control block to the segment as indicated by the forwarded write address information", as recited by dependent claim 4.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 4, and respectfully request that the Board reverse the rejection of dependent claim 4.

<u>Claim 5</u>

Claim 5 depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 5 is independently patentable over Milliken for at least the following reasons.

Claim 5 recites:

> "The method of claim 1, wherein the size of the segments corresponds to an integer multiple of the size of sectors as defined in a physical format on the storage medium."

On page 5 of the final Office Action dated May 29, 2009, the Examiner alleges that the element of "wherein the size of the segments corresponds to an integer multiple of the size of sectors as defined in a physical format on the storage medium", as recited by dependent claim 5, is disclosed by paragraphs [0009] and [0013] of Milliken. Appellants respectfully disagree for at least the following reasons.

The first cited paragraph of Millikan discloses "[m]ore recently, compressed audio technology has increased in popularity. An audio compression standard that has become widely used was promulgated by the Motion Picture Experts Group ('MPEG'). This group has introduced a variety of standards for compressing video and associated audio. Of these various standards the MPEG-1/2 Layer-3 standard ('MP3') has become widely used for compressing audio data for use in consumer products. Application of the MP3 standard can result in a compression ratio of 10:1 or greater. That is, with a 10:1 compression ratio ten times more information can be stored on a CD having the same capacity as with the conventional audio CDs for which the data is not compressed. With MP3 technology, a user can copy compressed audio files to a CD (a process typically referred to as 'burning' the CD) and then play the audio files via an MP3-compliant player. The MP3 player retrieves a compressed file from the disk, decompresses the file, and plays the file through speakers or headphones connected to the player. Some MP3 players decompress and play audio stored on a CD as noted

above, while other MP3 players decompress and play audio stored in solid state memory in the player. In the latter type of player, the user downloads MP3-compressed audio files directly into the MP3 player's memory." (see paragraph [0009])

The second cited paragraph of Milliken discloses "[i]n a standard computer time and amount of memory are not generally limiting factors. Standard personal computers typically include state of the art microprocessors operating at gigahertz or faster clock rates and large amounts of RAM (e.g., 128 megabytes). In a portable MP3 player, however, processing time and memory can indeed be limiting. The performance of a portable player is generally constrained by cost which generally means that the portable device has a slower microprocessor and much less memory than a desktop computer. Further, for MP3 players that can read audio files from a CD, it takes a significant amount of time for the player to move the laser beam to the correct spot on the disk to access a particular file. This time can be on the order of a few seconds. Thus, it would take an annoyingly long period of time for a portable player to access and sort through the metadata of hundreds of audio files stored on the CD. For these reasons and others, portable MP3 players generally do not provide the user the ability to sort through the files contained in the player. Instead, the user interface is limited to simply scrolling sequentially through the titles one at a time." (see paragraph [0013]).

As indicated above, except for merely containing the word "standard", the cited paragraphs of Milliken are in no way related to, much less anticipate, concepts of "segments" or "sectors", or their sizes being in any way related to each other. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the element of "wherein the size of the segments corresponds to an integer multiple of the size of sectors as defined in a physical format on the storage medium", as recited by dependent claim 5.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 5, and respectfully request that the Board reverse the rejection of dependent claim 5.

Claim 6

Claim 6 ultimately depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 6 is independently patentable over Milliken for at least the following reasons.

Dependent claim 6 recites:

"The method of claim 5, wherein the segments are allocated on the storage medium to be sector aligned."

On page 5 of the final Office Action dated May 29, 2009, the Examiner alleges that the element of "wherein the segments are allocated on the storage medium to be sector aligned", as recited by dependent claim 6, is disclosed by element 86 in FIG. 4 of Milliken. Appellants respectfully disagree for at least the following reasons.

Element 86 in FIG. 4 of Milliken is a "presort file" (see paragraphs [0032] and [0034]), hence a data structure. As indicated above, Milliken fails to disclose or suggest concepts of segment, sector, or ECC block, and are in no way related to concepts of memory alignment of any of these units relative to any other. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the element of "wherein the segments are allocated on the storage medium to be sector aligned", as recited by dependent claim 6.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 6, and respectfully request that the Board reverse the rejection of dependent claim 6.

Claim 7

Claim 7 depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 7 is independently patentable over Milliken for at least the following reasons.

Claim 7 recites:

> "The method of claim 1, wherein the indicating is realized by attaching to a data record to be written a version count value which is incremented and taken modulo a predefined upper bound upon each writing, the version count getting written to the database file as part of the data record being written thereto."

On page 5 of the final Office Action dated May 29, 2009, the Examiner alleges that the element of "wherein the indicating is realized by attaching to a data record to be written a version count value which is incremented and taken modulo a predefined upper bound upon each writing, the version count getting written to the database file as part of the data record being written thereto", as recited by dependent claim 7, is disclosed by paragraph [0046] of Milliken. Appellants respectfully disagree for at least the following reasons.

The cited paragraph of Millikan discloses "[i]f, however, the selected sorting criterion 94 includes a proxy value instead of a file name, the CPU 110 preferably converts or matches the proxy value to a corresponding file name by applying the same algorithm described above used by system 62 to generate the proxy values in the first place. The CPU 110 retrieves the file system information from the CD 71, decodes and decompresses the file system information if necessary, and stores the file system information in the player's memory 114 for subsequent use in playing the CD. The file system information, which contains the file names, contains, or permits the CPU 71 to recreate, the directory and file information used by system 62 (FIG. 3) to assign the proxy values as explained previously. By using the same algorithm as was used by system 62 to create the proxy values, the player 100 can accurately match the proxy values to the file names. This process of converting or matching proxy values to file names can be done during an initialization process as the CD 71 is inserted into the player 100 or at other suitable times."

As indicated above, the cited paragraph of Millikan relates to functions of "converting proxy values to file names", "retrieving file system information", "decoding

and decompressing file system information", "storing file system information", and "recreating directory and file information". None of these functions is related in any way to notions of "a data record to be written", "a version count value", "incrementing a version count value", or "writing the version count as part of the data record being written", as provided by dependent claim 7. Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the element of "wherein the indicating is realized by attaching to a data record to be written a version count value which is incremented and taken modulo a predefined upper bound upon each writing, the version count getting written to the database file as part of the data record being written thereto", as recited by dependent claim 7.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 7, and respectfully request that the Board reverse the rejection of dependent claim 7.

Claim 8

Claim 8 depends from independent claim 1 and is patentable over Milliken for at least the same reasons stated above in connection with independent claim 1. Moreover, Appellants submit that claim 8 is independently patentable over Milliken for at least the following reasons.

Claim 8 recites:

"The method of claim 1, wherein the size of the at least one area is chosen such that the average wear of the segments is equal."

On page 5 of the final Office Action dated May 29, 2009, the Examiner alleges that the element of "wherein the size of the at least one area is chosen such that the average wear of the segments is equal", as recited by dependent claim 8, is disclosed by paragraph [0040] of Milliken. Appellants respectfully disagree for at least the following reasons.

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The cited paragraph of Millikan discloses "[i]nstead of storing the names of the audio files as part of each entry 92 in the presort segments 90, a 'proxy' value can be used in its place. One embodiment of a proxy value is a one or two byte number. Each unique proxy value corresponds to an audio file. As a one byte number, the range of proxy values is large enough to correspond to 256 audio files. If the ability to accommodate more than 256 files is desired, then the proxy value can be expanded by an additional byte or bytes as is needed. Proxy values, which generally require fewer bits of storage than file names, may be preferred to reduce the demand for disk and player memory capacity."

As indicated above, the cited paragraph of Millikan relates to "disk demand", and "memory capacity", but not to a notion of "wear", as recited by dependent claim 8. Here, "wear" refers to sector degradation due to limited rewritability of the rewritable medium considered in our application (see, for example, page 1, lines 16-19 of Appellants' specification). Accordingly, Appellants submit that Milliken fails to disclose or suggest, *inter alia*, the element of " wherein the size of the at least one area is chosen such that the average wear of the segments is equal", as recited by dependent claim 8.

Accordingly, for at least the foregoing reasons, Appellants submit that Milliken fails to disclose each and every element of dependent claim 8, and respectfully request that the Board reverse the rejection of dependent claim 8.

B. Patentability of Claims 13-14

The rejection of claims 13-14 under 35 U.S.C. §103(a) as being unpatentable over the proposed combination of Millikan and Itoi should be reversed for at least the following reasons.

Claim 13

Claim 13 depends from independent claim 1 and is patentable over the proposed combination of Milliken and Itoi for at least the same reasons stated above in connection with independent claim 1.

Claim 14

Claim 14 ultimately depends from independent claim 1 and is patentable over the proposed combination of Milliken and Itoi for at least the same reasons stated above in connection with independent claim 1.

VIII. Claims Appendix

1.   A method for modifying a database file organized in segments and stored on a storage medium of limited rewritability, the method comprising the steps of:

-    reserving, within the database file, at least one area of predetermined size and position dedicated to writing thereto data records of at least one type, respectively;

-    indicating within the database file, as a last written segment that segment within the area to which data records were last written;

-    writing a specific data record of a specific type that is to be written to the database, into at least one of: a next available segment and a next available segments, after the last written segment within the area dedicated to the specific type;

-    continuing, whenever during the writing the end of the area has been reached, writing at a first available segment of the area.

2.   The method of claim 1, used for modifying a data record of a specific type in the database file wherein the database file contains an area dedicated to the specific type, and the method additionally comprises the steps of:

-    reading, from the area, the data record;

-    modifying the read data record;

-    obtaining a first write address information indicating a segment within the area to which a data record of the specific type was last written;

-    forwarding, as part of ensuring distributed write, the first write address information so that it indicates a next segment within the area which contains unused space;

-    writing the modified data record to segments starting at the segment as indicated by the first write address information.

3.   The method of claim 2, wherein the data record is a payload data record, the specific type is a "payload" type, the area is a payload area, the database file additionally has a control area and wherein the method additionally comprises the steps of:

-    in case that an address information about the payload data record is contained in a control block within the control area, reading, from the control area, the control block;

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-        updating the address information in the control block to reflect the first write address;

-        obtaining a second write address information indicating the segment within the control area to which a control block was last written;

-        forwarding, as part of ensuring distributed write, the second write address information so that it indicates a next segment within the control area which contains unused space;

-        writing the updated control block to the segment as indicated by the second write address information.

4.   The method of claim 1, used for deleting a payload data record from the database file , wherein the database file contains a control area, and the method additionally comprises the steps of:

-        reading, from the control area, control blocks containing information associated to the payload data record to be deleted;

-        marking, in the read control blocks, the payload data record to be deleted as deleted, thereby obtaining a modified control block;

-        obtaining a write address information indicating the segment within the control area to which a control block was last written;

-        forwarding, as part of ensuring distributed write, the write address information so that it indicates a next segment within the control area which contains unused space;

-        writing the modified control block to the segment as indicated by the forwarded write address information.

5.   The method of claim 1, wherein the size of the segments corresponds to an integer multiple of the size of sectors as defined in a physical format on the storage medium.

6.   The method of claim 5, wherein the segments are allocated on the storage medium to be sector aligned.

7.   The method of claim 1, wherein the indicating is realized by attaching to a data record to be written a version count value which is incremented and taken modulo a predefined upper bound upon each writing, the version count getting written to the database file as part of the data record being written thereto.

8.   The method of claim 1, wherein the size of the at least one area is chosen such that the average wear of the segments is equal.

13.   The method of claim 1, wherein the size of the segments corresponds to an integer multiple of the size of Error Correction Code blocks as defined in a physical format on the storage medium.

14.   The method of claim 13, wherein the segments are allocated on the storage medium to be Error Correction Code block aligned.

IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.

Please charge the fee for this Appeal Brief to Deposit Account 07-0832.

Respectfully submitted,

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